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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/619,057

07/14/2003

Edward B. Harris

HARRIS 19

6888

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10/31/2006

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EXAMINER

RODRIGUEZ, GLENDA P

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/619,057

Applicant(s)

HARRIS, EDWARD B.

Examiner

Glenda P. Rodriguez

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 25 is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Examiner acknowledges that the Applicant Elected Group I without traverse. Therefore, Examiner acknowledges that Claims 14-24 and 25-26 have been cancelled.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 8, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Shim et al. (US Patent No. 6, 977, 970).

Regarding a method for reading data bits from a hard disk drive comprising a magnetic storage disk, wherein magnetized regions of the magnetic storage disk represent data bits, comprising:

Producing a plurality of signals representative of the magnetization of a magnetized region of the magnetic storage disk (Col. 4, L. 55-60, wherein Shim et al. takes samples of the data bits and delays the same value. It is inherent that data bits recorded in the medium are magnetized regions or transitions in a disk.);

Averaging the plurality of signals to determine the data bit value represented by the magnetized region (Col. 14, L. 46-55, wherein it teaches that the signals are averaged.).

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Regarding Claim 11, Shim et al. teach all the limitations of Claim 8. Shim et al. further teach wherein the plurality of signals are sequentially generated (Col. 4, L. 55-60, wherein it teaches having a sequence of three delay at the output. See also Fig. 3).

Regarding Claim 12, Shim et al. teach all the limitations of Claim 8. Shim et al. further teach wherein introducing time delays to one or more of the plurality of signals (Shim et al. teaches delay units 221 through 224.).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shim et al. in view of Gardner et al. (US Patent No. 5, 805, 619).

Regarding Claim 9, Shim et al. teach all the limitations of Claim 8. However, Shim et al. does not explicitly teach time aligning the signals. Gardner et al. teaches this limitation in Col. 30, 12-21. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Shim et al.'s invention with the teaching of Gardner et al. in order to compensate for timing errors as discussed in the Abstract and Summary of Gardner et al.

Regarding Claim 10, the combination of Shim et al. and Gardner et al. teach all the limitations of Claim 8. The combination further teach wherein introducing time delays to one or more of the plurality of signals (Shim et al. teaches delay units 221 through 224.).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shim et al. in view of Yong (US Patent No. 6, 628, 645). Shim et al. teach all the limitations of Claim 8. However, Shim et al. does not explicitly teach wherein having a plurality of signals from a plurality of heads. This limitation is taught by Yong in Fig. 2. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Shim et al.'s invention with the teaching of Yong in order to detect defects in the disk surface as taught in the Abstract of Yong.

***Allowable Subject Matter***

7. Claims 1-7 and 25 are allowed.

8. The following is an examiner's statement of reasons for allowance: the primary reason for allowance is the inclusion of the limitation wherein a detector responsive to the signals for averaging the signals produced by each of the plurality of read heads positioned serially and in response thereto determining the data bit value represented by the magnetization.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Conclusion***

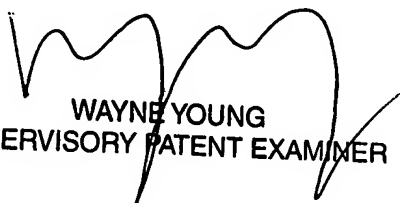
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (571) 272-7561. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
gpr  
10/25/06.

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER